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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,273	12/18/2006	Thomas Behr	3926.245	9235
41288	7590	04/15/2010		
PATENT CENTRAL LLC Stephan A. Pendorf 1401 Hollywood Boulevard Hollywood, FL 33020			EXAMINER TAOUSAKIS, ALEXANDER P	
			ART UNIT 3726	PAPER NUMBER
			MAIL DATE 04/15/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,273

Applicant(s)

BEHR ET AL.

Examiner

ALEXANDER P. TAOUSAKIS

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-6 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>08/04/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 4-5 in the reply filed on 12/07 is acknowledged. The traversal is on the ground(s) that the claims are related as product-by-process claims and a process, where the product-by-process claims recite the same essential process steps as the process claims. Therefore, all the claims are directed to the same invention. Also, the Applicant explains that the special technical feature is differential hardening and not a combined crankshaft and drive gear wheel which is formed by forging and undergoes heat treatment. This is not found persuasive because neither Hoyes nor Oyelayo et al teach the special technique feature of differential hardening. It is noted by the Examiner that the Election/Restriction dated 10/05/2009 has an obvious error, in the last paragraph of page 2, "It would have not been obvious" was meant to read ---It would have been obvious---. This is undisputable because the Examiner provides a motivation why the two references may be combined. Furthermore, it is noted that Group I is a product by process claim, which (see *MPEP* §2113) and the claims are limited only to the resulting structure of the process, where the resulting structure is the combined crankshaft and drive gear wheel that is hardened and has a carbide coating. The claims of Group II do not require differential hardening, as argued by the Applicant, but instead only require that the device is hardened. It is clear that Group II fails to make a contribution over the prior art in light of Hoyes (WO 00/47362) in view of Oyelayo et al (2002/0098392). Since both groups do not share a "special technical feature" and there is no unity of invention between the two groups.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoyes et al (WO 0047362) in view of Wilde et al (6,258,180), further in view of Oyelayo et al (2002/0098392).

4-5. Hoyes et al teaches, wherein the diesel engine includes a crankshaft with combined drive gear wheel (*see Figure 1, column 1 lines 1-2, and note that it is inherent that the diesel engine will be used for a diesel vehicle*), and wherein crankshaft and gear wheel are hardened (*see column 1 lines 21-22*).

The limitations, "wherein the hardness of the gear wheel is further increased by local differential thermal treatment during ADI heat treatment and/or by peening, wherein both the crankshaft and drive gear wheel are cast as one piece" is being

Art Unit: 3726

treated as a product by process limitation. As set forth in MPEP 2113, product by process claims are NOT limited to the manipulations of the recited steps, only to the structure implied by the steps. Once a product appearing to be substantially the same or similar is found, a 35 U.S.C. 102/103 rejection may be made and the burden is shifted to applicant to show an unobvious difference See MPEP 2113.

The structure implied by the above process steps is a crankshaft combined with a drive gear wheel manufactured from tempered ductile iron (ADI), has been heat treated and the gear teeth have a carbide containing coating (CADI).

Hoyes et al fail to teach wherein the crankshaft and drive gear wheel are manufactured from tempered ductile iron (ADI) and have a carbide containing coating (CADI).

Wilde et al teaches producing a crankshaft out of an austempered ductile iron (*see column 2 lines 55-60, where it discloses producing crankshafts, and see column 4 lines 4-12*).

Oyelayo et al teach a carbide coating deposited on gear teeth (*see [0029]*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to produce the crankshaft/drive gear wheel of Hoyes et al out of an austempered ductile iron, as taught by Wilde et al, because it has exceptional strength

Art Unit: 3726

and toughness (see *Wilde et al* column 2 lines 23-25). Furthermore, it would have been obvious to provide a carbide coating onto the gear teeth of Hoyes et al, as taught by Oyelayo et al, because it will increase its surface hardness and wear resistance.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER P. TAOUSAKIS whose telephone number is (571)272-3497. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alexander P Taousakis
Examiner
Art Unit 3726

/Alexander P Taousakis/
Examiner, Art Unit 3726



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SUPERVISORY PATENT EXAMINER